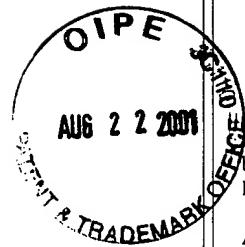


GAU- 1644



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Assistant Commissioner for Patents,
Washington, D.C. 20231,
On August 20, 2001

The Law Offices of Jonathan Alan Quine
By Deborah Berwick
Deborah Berwick

Attorney Docket No. 02-100620US
Client Ref. No. 0139.310US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Steven H. Bass, *et al.*

Application No.: 09/760,010

Filed: January 10, 2001

For: INTEGRATED SYSTEMS AND
METHODS FOR DIVERSITY
GENERATION AND SCREENING

Examiner: **Unassigned**

Art Unit: **1644**

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR § 1.97 and
§ 1.98

Assistant Commissioner for Patents
Washington, D.C. 20231

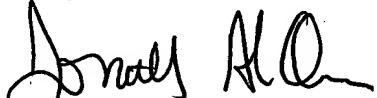
Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Jonathan Alan Quine
Reg. No. 41,261

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JAQ:db

Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		Complete if Known	
		Application Number	09/760,010
		Filing Date	January 10, 2001
		First Named Inventor	Steven H. Bass
		Group Art Unit	1644
		Examiner Name	Unassigned
		Attorney Docket Number	02-100620US

U.S. PATENT DOCUMENTS				
Examiner Initials	Cite No.	U.S. Patent Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document
	AA	5,512,463		Stemmer
	AB	5,514,588		Varadaraj
	AC	5,605,793		Stemmer
	AD	5,763,239		Short et al.
	AE	5,789,228		Lam et al.
	AF	5,811,238		Stemmer et al.
	AG	5,814,473		Warren et al.
	AH	5,824,469		Horwitz et al.
	AI	5,830,696		Short
	AJ	5,830,721		Stemmer et al.
	AK	5,834,252		Stemmer et al.
	AL	5,837,458		Minushull et al.
	AM	5,866,363		Pieczenik
	AN	5,876,997		Kretz
	AO	5,925,749		Mathur, et al.
	AP	5,928,905		Stemmer, et al.
	AQ	5,939,250		Short, Jay M.
	AR	5,939,300		Robertson, et al.
	AS	5,942,430		Robertson, et al.
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	AU	5,958,672		Short, Jay M.
	AV	5,958,751		Murphy, et al.
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	AY	5,965,408		Short, Jay M.
	AZ	5,985,646		Murphy, et al.
	BA	6,001,574		Short et al.
Examiner Signature				Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		Group Art Unit	1644
		Examiner Name	Unassigned
		Attorney Docket Number	02-100620US

	BB	6,004,788		Short	12-21-1999	
	BC	6,030,779		Short	02-29-2000	
	BD	6,054,267		Short	04-25-2000	
	BE	6,057,103		Short	05-02-2000	
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	BH	6,132,970		Stemmer	10-17-2000	
	BI	6,165,793		Stemmer	12-26-2000	
	BJ	6,168,919		Short	01-02-2001	
	BK	6,171,820		Short	01-09-2001	
	BL	6,174,673		Short, et al.	01-16-2001	
	BM	6,180,406		Stemmer	01-30-2001	
	BN	6,238,884		Short et al.	05-29-2001	

FOREIGN PATENT DOCUMENTS							
Examiner Initials	Cite No.	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number				
	BO	WO	97/07205	Novo Nordisk A/S	02-27-1997		
	BP	WO	97/20078	Affymax Technologies	06-05-1997		
	BQ	WO	97/25410	Novo Nordisk A/S	07-17-1997		
	BR	WO	97/35957	Maxygen, Inc.	10-02-1997		
	BS	WO	97/35966	Maxygen, Inc.	10-02-1997		
	BT	WO	97/44361	Recombinant Biocatalysis Inc.	11-27-1997		
	BU	WO	97/48416	Recombinant Biocatalysis, Inc.	12-24-1997		
	BV	WO	97/48717	Recombinant Biocatalysis Inc	12-24-1997		
	BW	WO	97/48794	Recombinant Biocatalysis Inc	12-24-1997		

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		First Named Inventor		Steven H. Bass	
		Group Art Unit		1644	
		Examiner Name		Unassigned	
		Attorney Docket Number		02-100620US	

	BX	WO	98/00526		Recombinant Biocatalysis Inc	01-08-1998		
	BY	WO	98/01581		Recombinant Biocatalysis Inc	01-15-1998		
	BZ	WO	98/13485		Maxygen, Inc.	04-02-1998		
	CA	WO	98/13487		Maxygen, Inc.	04-02-1998		
	CB	WO	98/24799		Diversa Corp.	06-11-1998		
	CC	WO	98/27230		Maxygen, Inc.	06-25-1998		
	CD	WO	98/28416		Novo Nordisk A/S	07-02-1998		
	CE	WO	98/31837		Maxygen, Inc.	07-23-1998		
	CF	WO	98/36080		The Dow Chemical Company	08-20-1998		
	CG	WO	98/41622		Novo Nordisk A/S	09-24-1998		
	CH	WO	98/41623		Novo Nordisk A/S	09-24-1998		
	CI	WO	98/41653		Novo Nordisk A/S	09-24-1998		
	CJ	WO	98/42832		California Institute of Technology	10-01-1998		
	CK	WO	98/48034		Diversa Corp.	10-29-1998		
	CL	WO	98/58085		Diversa Corp.	12-23-1998		
	CM	WO	99/07837		Diversa Corp.	02-19-1999		
	CN	WO	99/08539		Diversa Corp.	02-25-1999		
	CO	WO	99/10472		Diversa Corp.	03-04-1999		
	CP	WO	99/10539		Diversa Corp.	03-04-1999		
	CQ	WO	99/19518		Diversa Corp.	04-22-1999		
	CR	EP	0911396A2		Maxygen, Inc.	04-28-1999		
	CS	WO	99/21979		Maxygen, Inc.	05-06-1999		
	CT	EP	0911396A3		Maxygen, Inc.	05-06-1999		
	CU	WO	99/23107		Maxygen, Inc.	05-14-1999		
	CV	WO	99/23236		Diversa Corp.	05-14-1999		
	CW	EP	0934999A1		Maxygen, Inc.	08-11-1999		

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Attorney Docket Number	02-100620US		

	CX	WO	99/41368		Maxygen, Inc.	08-19-1999		
	CY	WO	99/41369		Maxygen, Inc.	08-19-1999		
	CZ	WO	99/41383		Maxygen, Inc.	08-19-1999		
	DA	WO	99/41402		Maxygen, Inc.	08-19-1999		
	DB	WO	99/45154		Diversa Corp.	09-10-1999		
	DC	WO	99/57128		Maxygen, Inc.	11-11-1999		
	DD	WO	99/65927		Maxygen, Inc.	12-23-1999		
	DE	WO	00/42560		Maxygen, Inc.	07-20-2000		
	DF	WO	00/42561		Maxygen, Inc.	07-20-2000		
	DG	WO	00/53744		Diversa Corporation	09-14-2000		
	DH	WO	00/58517		Diversa Corporation	10-05-2000		
	DI							

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	DJ	Chang, C., et al. (1999) "Evolution of a cytokine using DNA family shuffling." <u>Nature Biotechnology</u> 17:793-797.	
	DK	Christians, F.C. et al., (1999) "Directed evolution of thymidine kinase for AZT phosphorylation using DNA family shuffling." <u>Nature Biotechnology</u> 17:259-264.	
	DL	Coco et al., (2001) "DNA shuffling method for generating highly recombined genes and evolved enzymes" <u>Nature Biotechnology</u> vol. 19 pp. 354-359	
	DM	Cramer et al., (1993) "10(20)-Fold aptamer library amplification without gel purification," <u>Nuc. Acids Res.</u> 21(18):4410.	
	DN	Cramer, A. & Stemmer W.P.C. (1995) "Combinatorial multiple cassette mutagenesis creates all the permutations of mutant and wildtype cassettes." <u>Biotechniques</u> 18:194-195.	
	DO	Cramer, A. et al. (1996) "Improved green fluorescent protein by molecular evolution using DNA shuffling." <u>Nature Biotechnology</u> 14:315-319.	
	DP	Cramer, A. et al. (1996) "Construction and evolution of antibody-phage libraries by DNA shuffling." <u>Nature Medicine</u> 2:100-103.	
	DQ	Cramer, A. et al., (1997) "Molecular evolution of an arsenate detoxification pathway by DNA shuffling." <u>Nature Biotechnology</u> 15:436-438	
	DR	Cramer, A. et al., (1998) "DNA shuffling of a family of genes from diverse species accelerates directed evolution." <u>Nature</u> 391:288-291.	

Examiner Signature	Date Considered
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		Group Art Unit	1644
		Examiner Name	Unassigned
		Attorney Docket Number	02-100620US

	DS	Gates, C.M. et al., (1996) "Affinity selective isolation of ligands from peptide libraries through display on a lac repressor 'headpiece dimer'. <i>Journal of Molecular Biology</i> 255:373-386.	
	DT	Minshull, J., Stemmer, W.P.C. (1999) "Protein evolution by molecular breeding." <i>Current Opinion in Chemical Biology</i> 3:284-290.	
	DU	Ness, J. et al., (1999) "DNA shuffling of subgenomic sequences of subtilisin." <i>Nature Biotechnology</i> 17:893-896.	
	DV	Patten, P.A. et al., (1997) "Application of DNA Shuffling to Pharmaceuticals and Vaccines." <i>Current Opinion in Biotechnology</i> 8:724-733.	
	DW	Pelletier, Joelle N., (2001) "A Rachitt for our toolbox" <i>Nature Biotechnology</i> vol. 19, p. 314-315	
	DX	Stemmer, W.P.C. (1994) "DNA Shuffling by random fragmentation and reassembly: In vitro recombination for molecular evolution." <i>PNAS</i> 91:10751	
	DY	Stemmer, W.P.C. (1994) "Rapid evolution of a protein in vitro by DNA shuffling." <i>Nature</i> 370:389-391.	
	DZ	Stemmer, W.P.C. (1995) "The Evolution of Molecular Computation." <i>Science</i> 270:1510	
	EA	Stemmer, W.P.C. (1995) "Searching Sequence Space." <i>Bio/Technology</i> 13:549-553.	
	EB	Stemmer, W.P.C. (1996) "Sexual PCR and Assembly PCR." In: <i>The Encyclopedia of Molecular Biology</i> . VCH Publishers, New York. pp. 447-457.	
	EC	Stemmer, W.P.C. & Soong, N.W. (1999) "Molecular breeding of viruses for targeting and other clinical properties." <i>Tumor Targeting</i> 4:59-62.	
	ED	Zhang, J. et al., (1997) "Directed evolution of an effective fucosidase from a galactosidase by DNA shuffling and screening." <i>Proceedings of the National Academy of Sciences, USA</i> 94:4504-4509.	

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